

REMARKS

With this amendment, Applicants have amended claim 103 to correct a typographical error. Further, Applicants have amended claims 107 and 108 for clarity. Thus, upon entry of the present amendment, the pending claims remain 90-122. Applicants have also amended a number of typographical errors in the specification. In particular, the amendment to Equation (C) on page 39 of the specification introduces no new matter to the application since the correction to equation (C) merely brings the equation into accord with the definition for H_{xy} given by Equation (A) on page 36 of the specification. Finally, Applicants have replaced the abstract at the request of the Examiner. No new matter has been added by way of these amendments to the claims and specification or by the replacement abstract.

This amendment responds to the September 9, 2004 Office Action. In the Office Action the Examiner:

- allowed claims 90-107 and 110-122;
- rejected claims 108 and 109 under 35 U.S.C. § 112 for indefiniteness;
- objected to the abstract for not describing the method claims of the present invention; and
- requested that Applicants provide copies of references cited on pages 1-6, 13, 15, 18, 20, 24, 26, 27, 30, 32, 36, 38, and 40 of the specification.

Applicants address these points in turn.

THE 35 U.S.C. § 112 REJECTION SHOULD BE WITHDRAWN

The Examiner has rejected claims 108 and 109 under 35 U.S.C. § 112, second paragraph, as being indefinite. In response, Applicants have amended claim 108 for clarity. Claim 109 now recites the limitation “setting a first energy spacing between a first energy level and a second energy level of the resonant control circuit so that the first energy spacing is approximately equal to a second energy spacing between a first energy level and a second energy level of the first qubit.” With the amendment, claim 108 is no longer indefinite. Claim 109, which depends on claim 108, is therefore also no longer indefinite. Accordingly, Applicants request that the 35 U.S.C. § 112, second paragraph, rejection of claim 108 and 109 be withdrawn.

THE OBJECTION TO THE ABSTRACT SHOULD BE WITHDRAWN

The Examiner has objected to the abstract of the disclosure because it does not describe the method claims of the claim invention. Applicants have provided a replacement abstract that describes the claimed subject matter. Specifically, the abstract now encompasses pending independent claims 90 and 102. The proposed replacement amendment does not introduce new matter. Approval and entry of the amendment is respectfully requested. Furthermore, withdrawal of the objection in view of the provision of the new abstract is respectfully requested.

**APPLICANTS HAVE PROVIDED REFERENCES REQUESTED
BY THE EXAMINER**

The Examiner has requested that Applicants provide copies of references cited on pages 1-6, 13, 15, 18, 20, 24, 26, 27, 30, 32, 36, 38 and 40 of the specification. Applicants provided an information disclosure statement on October 8, 2004 (references AA-CN) that includes copies of the requested references. Withdrawal of the objection, in view of the provision of the information disclosure statement and cited references, is respectfully requested.

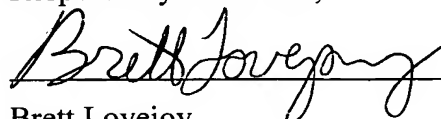
CONCLUSION

Applicants respectfully request that the above-mentioned amendments and remarks be entered and made of record in the file history of the subject application. It is believed that all claims are fully allowable and early indication of the same is earnestly sought.

It is believed that no fees are due in connection with the filing of this amendment. However, should the United States Patent and Trademark Office determine otherwise, please charge the required fee to Jones Day deposit account no. 50-3013, referencing CAM No. 706700-999189.

Date: November 1, 2004

Respectfully submitted,



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